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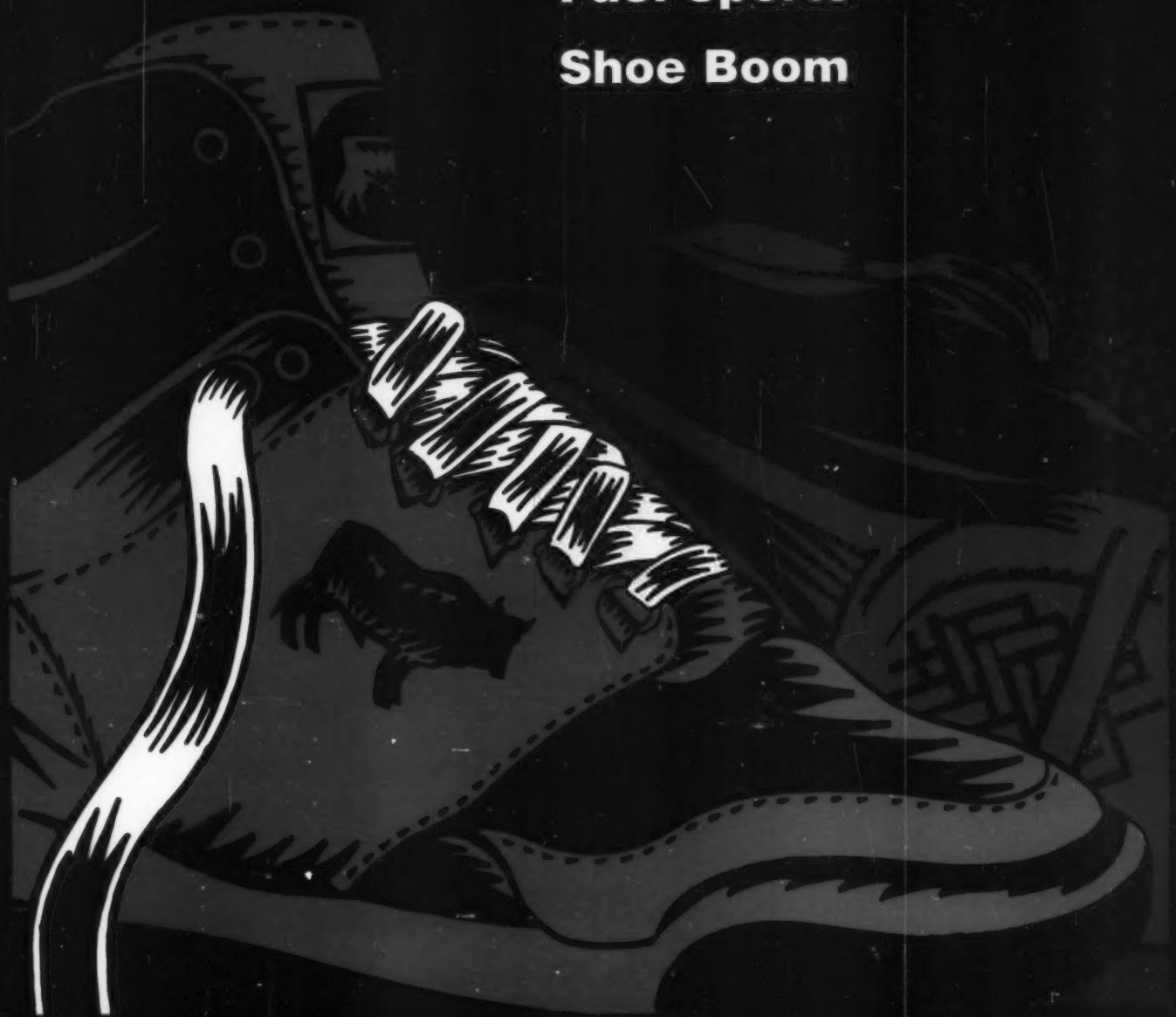
Cowhide Exports

Fuel Sports

Shoe Boom



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PERSPECTIVES

THE SOVIET UNION has not been highly successful at agricultural reform in the last few years. If and when substantive changes occur, the new form taken by the Soviet farm economy will be important to U.S. farmers, who have been selling significant amounts of their products to the USSR.

The Soviet Union was the second largest importer (behind Japan) of U.S. agricultural products in 1989, buying a record $3.6 billion worth. The United States supplied almost a fifth of Soviet agricultural imports and about two-thirds of its grain imports.

The sales included $2.1 billion worth of corn, $827 million of wheat, $465 million of soybeans and meal, $26 million of tallow, and $20 million of fruit, nuts, and berries. The 18.6 million tons of U.S. corn amounted to about 90 percent of Soviet corn purchases. Expansion into new product areas also occurred, with major sales of chicken legs and butter.

In the future, U.S. farm exports to the Soviet Union must capture a larger market share in order to expand, because total Soviet imports are not likely to increase, according to ERS economist Kathryn Zeimetz.

The signing of new grain trade agreements suggests that the Soviet Union anticipates sizable wheat imports through the mid-1990's, Zeimetz says. There has been criticism of the import policies, however. Lamenting agricultural imports, which averaged almost $18 billion annually in the 1980's, has recently been a popular exercise in the Soviet press and among certain government officials, Zeimetz says.

Because of an unwillingness to face negative public reaction, the Soviet government has continually postponed price reform and has failed to make real improvements in the banking, credit, and land tenancy systems, ERS economist Edward Cook says. But new programs have been discussed in recent weeks.

Soviet President Mikhail Gorbachev has focused his reform efforts on strengthening incentives and improving flexibility in the economy, Cook says. The track record on both points has not been good, however. The basic strategy of the government still relies on increased resource flows into agriculture, with little attention to improving the quality and efficient utilization of the resources. Conservative officials and bureaucrats are a roadblock in the way of real reform, because they still exercise considerable control in such areas as leasing of land, allocation of inputs, and judicial support of new laws and regulations, the ERS economists point out.

Developing an economically rational Soviet trade strategy (and domestic food policy) based on the principle of comparative advantage—exporting goods that are relatively inexpensive to produce and importing those that are relatively expensive to produce—is hampered by price distortions, Zeimetz says.

Solutions to such problems as the low quality of agricultural inputs, an inefficient distribution system, and entrenched, unworkable investment and compensation systems extend beyond agricultural reform to needed changes in the overall Soviet economic system, Zeimetz says.

If the Soviet government achieves an economic program that truly relies on privatization, market prices, and incentives for efficiency and quality, the performance of the Soviet economy—including the agricultural sector—could improve substantially, Zeimetz says.

—Jack Harrison

FARMLINE

AGRICULTURE...NATURAL RESOURCES...RURAL DEVELOPMENT
Practical economic intelligence from USDA's Economic Research Service

FEATURES

Sports Shoe Boom Fuels Cowhide Exports *by Doug Martinez* 2

Americans are wearing more and more expensive leather sports shoes made from the hides of U.S. cattle. Most of the shoes are manufactured in East Asian countries, especially South Korea. This process has given a strong boost to a previously low-profile farm export commodity.

Generic Advertising of Farm Products Grows Rapidly *by Judith Foulke* 6

More than $750 million was spent last year on generic advertising of U.S. farm products. About 350 such programs cover some 80 commodities. Economists are seeking better ways to determine the effectiveness of the effort.

U.S. Farmland Values Rise 4 Percent in 1989 *by Jack Harrison* 10

It was the third straight year of an upward trend in farmland values. The national average of $693 an acre was 16 percent above the low point of $599 and 16 percent below the 1982 high point of $823.

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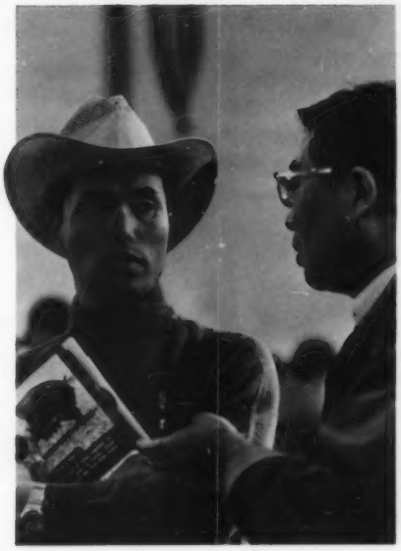


Sports Shoe Boom Fuels Cowhide Exports

U.S. exporters of cattle hides are counting on Americans' continued fascination for fashionable, high-priced sports shoes to buoy their industry.

It is, in fact, that extra spring in the step from fancy athletic footwear that has lifted the low-profile cattle hides industry to the status of star performer among U.S. agricultural exports.

The reason: U.S. cattle hides are transformed into $50-plus athletic shoes—and other leather footwear—by East Asian countries for export back to the United States.

"Since the mid-1980's, East Asia has given new life to cattle hide exports," says economist Christine Bolling of USDA's Economic Research Service. "East Asia has been an importer of U.S. cattle hides since the 1970's, but it is only since 1985 that East Asia has taken more than 80 percent of our cattle hide exports."

In 1987, she notes, U.S. sales of cattle hides to East Asia surpassed the billion-dollar mark, and in 1989 reached $1.1 billion. The increase in cattle hide exports has made hides and skins America's sixth largest agricultural export. (Exports account for roughly half of cattle hide sales.)

East Asia takes more than 80 percent of U.S. cattle hide exports.

Shoes Made for U.S. Firms

The story of this sharp growth started several years earlier, however.

"U.S. companies, taking a global look at the industry, sought out countries like South Korea which had low labor costs and manufacturing know-how for this labor-intensive industry," says Bolling. "Building on this base, the Korean industrial sector has also increased its production of higher-valued leather shoes and has expanded into leather clothing."

She goes on to say that "U.S. companies have dealt with Korean shoe manufacturers (and to a lesser extent with those in other East Asian countries) through a system where shoes are made to specifications for the U.S. market."

She adds that South Korea is now the world's second-largest footwear exporter after Italy. In 1988, its total footwear exports rose 35 percent over 1987 to reach $3.8 billion.

"Nearly 90 percent of total 1988 footwear output was exported and ranked sixth by value of all South Korean exports," says Bolling. "South Korea has carved out a special niche in the world shoe market by supplying leather sports shoes to the United States."

South Korea exported more than 150 million pairs of leather shoes to the United States in 1988, compared to less than 25 million pairs in 1982.

"Leather shoes—most of which are athletic shoes—are now 60 percent of South Korea's shoe exports to us," says Bolling. "By value, South Korea's footwear exports to the United States reached $2.3 billion in 1988, a 28 percent increase over 1987. The United States takes 61 percent of South Korea's footwear exports, followed by Japan, West Germany, and France."

Taiwan has also reaped gains from shoe exports to the United States. In 1988, Taiwan exported $3.7 billion of shoes overall, including 120 million pairs of leather shoes valued at $1.4 billion. Taiwan's leather shoe exports, which mostly go to the United States, have declined since 1986—but the value has been higher as Taiwan produced more expensive shoes.

Japan is the third major importer (among East Asian nations) of U.S. cattle hides, but the emphasis of its footwear industry is different than that of South Korea and Taiwan.

"Japan's leather footwear industry is oriented toward domestic needs," says Bolling. "Japan was a shoe exporter in the 1960's, but the increased cost of labor in comparison to other countries made export of shoes unprofitable."

As Japan enjoys increased per capita disposable income, she says, the Japanese

Kansas the Leader In Exporting Hides

Kansas may be the nation's biggest exporter of live animals and meat, but there's another statistic about the state that is equally significant—and probably much more surprising.

The state is the largest exporter of hides and skins (primarily cattle hides) among American states—and these exports are larger (at $305 million in fiscal year 1988) than those of the state's live animals and meat (valued at $294 million in the same year).

Kansas still is the leader in another export category—wheat, which at $905 million in fiscal 1988 outshines the hides and skins exports. Feed grains exports from the state, valued at $355 million, are also higher than hides and skins.

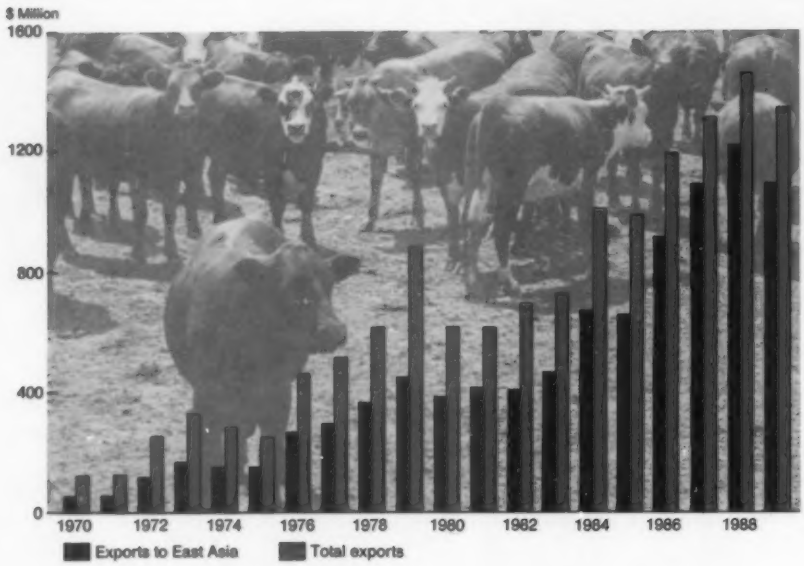
"But the fact that cattle hides have pushed the hides and skins category up to third place on Kansas' list of farm exports is very impressive," says ERS economist Christine Bolling.

Other states have also benefited from the surge in sales of cattle hides. Texas exported $285 million in hides and skins in fiscal 1988, just $1 million shy of what it exported in live animals and meat.

Nebraska was the third largest American exporter of hides and skins at $278 million, nearly matching the $279 million it exported in live animals and meat.

In fourth place was Iowa, with hides and skins exports of $108 million. Colorado was next with hides and skins exports of $103 million, which equalled its live animals and meat export sales.

U.S. Exports of Cattle Hides Soared in the 1980's



are demanding more upscale products like leather shoes. Sharper demand should lead to larger production, which in turn should strengthen demand for cattle hides. This demand has already prompted imports of leather shoes from neighboring countries.

"Japan increased its cattle hide imports from the United States by 8 percent in 1989 and will most likely increase imports again in the 1990's," says Bolling.

Labor Costs Are a Factor

Other major changes are also coming for the countries involved in leather footwear exports. Labor costs are one reason why.

Bolling cites the situation in South Korea as an example.

"Initially, South Korea was able to enter the shoe manufacturing industry for export because of its low labor costs," says Bolling. "In 1981, wage rates in the shoe manufacturing industry were $206 a month. By 1988, monthly wages for footwear manufacturing were $368."

Some of the wage increase has been overcome by gains in labor productivity, says

Bolling. But, like U.S. companies a decade earlier, South Korea has embarked on its own search for cheaper labor in other countries.

"South Korean shoe manufacturing companies have established overseas factories in Southeast Asia, where wages are only 30 to 50 percent of those paid to South Korean workers," says Bolling. "Overseas plant investments have increased from 5 in 1987 to 15 plants in 1988."

Besides Indonesia with 7 plants, South Korean businessmen have set up shoe assembly operations in Thailand, Sri Lanka, the Philippines, and Chile. □

[Based primarily on information provided by economists Christine Bolling and Lawrence Duewer of the Agriculture and Trade Analysis Division, Economic Research Service.]

Technology Speeds Processing of Hides

It can take less than a minute to strip the hide off a 700-pound steer carcass, the first and fastest step in the process of turning raw hides into an export-ready commodity.

Although the process may vary somewhat depending on the plant and its equipment, it typically follows a standard procedure, according to ERS economist Lawrence Duewer.

Using a hide stripping machine originally developed in Canada, two workers with knives can remove a hide in about 42 seconds—an operation that used to take three to five knifemen about 120 seconds to complete manually. (Faster and more expensive machines can cut the time down to 20-25 seconds.)

The main features of the hide stripper are a vertical dual track with an electrical chain drive running up the middle which pulls off the hide.

Some manual skinning is still required, however, on the shanks (legs) and some other parts of the animal.

One major advantage of the hide stripper over older systems is that it results in less waste and higher yield of both carcass and hide.

Next the hide is trimmed. All parts which will not make leather must be removed prior to curing the hide. If they are left on the hide during the curing process, they may cause serious damage. Excessive meat and fat, bones, and sinews are readily attacked by bacteria and the hide will begin to decompose more rapidly.

Trimming is followed by washing. In addition to removing grit and blood, the hide washer softens and cools the hide. As the washer revolves, stationary wooden pins gently agitate and advance the hide.

The hide is now ready for the fleshing machine, which can handle between 700 and 1,000 hides during an 8-hour workday.

More grit and other foreign material is removed, and the machine—by means of cylinders and revolving cylinder cutting blades—is capable of cutting off as much as 18 pounds of fat and flesh per 100 pounds of hide.

After fleshing, the hides are taken from the machine by a hook conveyor and dropped into a brine vat, where they are circulated for about 16 hours. They are removed by hook conveyor and taken to a continuous-feed brine wringer.

Then the hide is folded along the center of the back, head to tail, with flesh side out and straightened out on the conveyor, which feeds the folded hide into a wringer. Passing through the wringer, the hide drops onto another takeoff conveyor, where it is inspected, graded, bundled, weighed, and placed on pallets ready for shipment.

Generic Advertising of Farm Products Grows Rapidly

More than $750 million was spent last year on "generic" (not brand-name) advertising of U.S. agricultural products in promotions aimed at the domestic and foreign markets.

Growth in the number and extent of the promotions has spurred public debate about the costs and benefits to farmers and the effect on food budgets and choices for consumers. Both the federal government and farmers help to fund the promotions. Although farmers have shown confidence in the programs by voting for them in state referendums, they, as well as the government, would like to know that their dollars are well spent, says economist Noel Blisard of USDA's Economic Research Service.

Many generic campaigns have not been under way long enough for results to be clear, says Blisard. However, two of the older programs, cheese and Florida citrus products, have been studied in depth and the researchers have concluded that sales have been boosted by the advertisements.

Generic advertising is not a new idea. The first promotion funded by farmers through a state association was for Florida oranges 50 years ago. Federal authorization for promotional funds started with the National Wool Act of 1954, and has been continued by Congress in each major farm act since then. Authorization for other commodities has been added over the years. Currently, there are over 350 programs covering about 80 commodities.

Dairy, beef, and pork producers are the leaders in promotional contributions.

Programs can be funded and managed entirely by producers (free-standing operations) or tied to USDA regulatory programs (marketing or promotion orders).

The amount farmers contribute to a promotion is set by legislation. For beef, the assessment is $1 per head. Usually the money is collected at the first step of the marketing process in a checkoff program. The checkoff is an agreement between farmers and their buyers (or first handlers) through which buyers assess the farmers for the money that goes into the promotion fund.

Programs must be carefully designed to distribute benefits fairly since all producers contribute proportionally to the fund, says Blisard. Ads should cover a range of product uses, and represent the full range of interests among producers.

For example, says the economist, if assessments are collected on a product that is marketed in both fresh and processed forms, such as milk and cheese, advertising should be directed at markets for both or the gains might not be proportional.

Some Programs Allow Refunds

A few of the programs offer producers the option of having their assessments refunded. But Blisard says that refunds create administrative burdens. Uncertainty about how many refunds there will be undercuts program administrators' ability to plan long-term campaigns and often leads to financial problems. For example, says

Blisard, when refunds for the egg and cotton programs were allowed, they ran up to 30 percent or more of the working funds in 1982-83.

Offering refunds also raises concerns about fairness to farmers who support the program. Because generic ads promote a type of food, such as milk or beef, all producers in the industry benefit from the campaign, whether they contribute or not. "Free-riders" who take refunds gain but do not share in the costs.

The recent federally mandated generic advertising programs require producers to participate for a specified period of time, usually 2 years. At the end of that time they vote on whether to continue the program. Holding a referendum after a trial period gives producers a chance to see how a program would work, says Blisard.

In the past, a majority, or sometimes two-thirds, of the producers of a commodity had to approve a checkoff program before it was established. The dairy program, under the Dairy and Tobacco Adjustment Act of 1983, was the first federally authorized generic campaign that was started before a referendum was taken. The beef and pork industries followed suit with the same kinds of programs.

Evaluating Generic Ad Campaigns Is Difficult

Generic advertising of agricultural products in overseas markets is financed jointly with federal funds and producer checkoffs and is administered differently than its domestic counterparts. But there are similar problems assessing the effectiveness of the ads.

Program managers for most commodities report increased sales. But they also admit that they haven't found a practical way to attribute sales success to their promotions.

One of the ways that sales success could be measured is to determine the relationship between advertising costs and sales. But most commodity program managers find that the research involved in determining that link is difficult and takes too much time to be of real value in decisionmaking, says economist Les Myers of USDA's Economic Research Service. By the same token, however, they want to spend funds in ways that will translate most efficiently into higher profits for producers and increased exports.

Myers views evaluation as a necessary activity. He says that both the government and farmers who fund the programs need a reference to decide if their investments, which are considerable, are worthwhile.

Evaluating foreign market development activities is more complicated than evaluating domestic promotion efforts, say analysts. Trade-related variables such as exchange rates and export/import policies must be considered. The problem is compounded by cultural and taste differences which vary considerably among the countries and in their responsiveness to market signals.

Myers notes that data describing changes in consumption by foreign consumers of the promoted products are often inadequate or inappropriate. And some foreign market development programs are too small to justify the expense of evaluation.

The federal government has significantly increased its spending for export promotions since the 1985 farm bill, which authorized additional funds for programs to combat "unfair trade practices." This year federal budget allocations for the export promotion programs are $235 million, $200 million more than 5 years earlier. Government spending on the programs is administered by the Foreign Agricultural Service in the Cooperator Program (Cooperator), the Export Incentive Program (EIP), and, added in 1985, the Targeted Export Assistance Program (TEA).

There are about 120 producer checkoff programs for export promotion. Under the Cooperator and the EIP programs, industry commodity groups are expected to share the costs.

Myers says that if the TEA program is to reach its objective of offsetting the effects of barriers to entry and export subsidies, the administrators must address two concerns. First, the TEA objective must serve the public good, and second, the programs or activities which are funded (technical assessment, trade servicing, or consumer promotions) must be consistent with TEA objectives.

Short-term analyses from some economic studies have been useful, says Myers, but complete evaluation must answer such questions as:

- What is the return to producers?
- What is the effect on the U.S. macroeconomy including federal budget outlays?
- What is the effect on U.S. trade versus trade by other competing suppliers?

Myers says that complete answers to these questions require study by economists. "There exists the technical expertise to conduct these rather sophisticated evaluations for foreign market development programs in terms of additional sales, dollar revenues and market share," says the economist.

But data that program managers can use for decisionmaking will take time to collect and analyze. "At the very least," says Myers, "reporting of promotion expenditures by time period, type of activity, commodity, and geographic market should be one of the requirements for government program funding.

Money that producers contribute to the programs is used for product development and research as well as for domestic and overseas market promotions. In 1986, a total of $530 million was collected from producers. About $300 million came from dairy, beef, and pork producers, who have contributed the majority of promotion funds since their industries started large promotions in 1983.

About 82 percent of the total collected, or $435 million, was used for promotion and research. The rest went for refunds, administration, and other costs.

Nearly 90 percent of the promotion and research money was aimed at domestic markets. Almost half of the promotion money and about a quarter of the research money was used on the dairy industry.

About $35.9 million of producer assessments was spent on foreign market devel-

USDA Assists in Overseas Market Promotions

In fiscal 1990, $235 million in federal funds was budgeted for the Cooperator Market Development Program (Cooperator), the Export Incentive Program (EIP) and the Targeted Export Assistance (TEA) program, three USDA programs that share the cost of overseas market promotion with producers.

Most of the federal funding for overseas advertising is in the Cooperator program, authorized in 1954 and administered by the Foreign Agricultural Service. Its goal is to develop, maintain, and expand overseas markets. The program funds three general types of activities: trade servicing, technical assistance, and consumer promotion.

Trade servicing includes such activities as sponsoring study teams from foreign countries to learn about U.S. production capacity and reliability, and advertising in foreign trade periodicals.

Technical assistance is given to actual or potential foreign buyers in feeding trials and demonstrations, animal nutrition seminars, and product development research.

Consumer promotion can be either generic or identified. Generic promotions are for raw agricultural commodities without identifying them by brand name. For example, the generic promotion of soybeans may consist of margarine and tofu sales campaigns and consumer education seminars. Identified promotions attempt to enhance demand for a specific commodity by making direct reference to it in the campaign, such as promoting soybean oil with baking and cooking seminars.

Brand advertising is part of EIP. This program provides market development funds in cases where FAS has determined that branded promotion would be more effective. It is generally limited to private U.S. firms or agricultural cooperatives selling products under a registered trademark such as Dole and Sunkist. EIP agreements operate on a much smaller scale than Cooperator. They typically run for 3 years and there are fewer contracts. In 1985, FAS had 47 Cooperator contracts and only 16 EIP. In 1986, EIP accounted for less than 5 percent of total government expenditures on export market development projects.

TEA, authorized under the 1985 farm bill, is scheduled to terminate in 1990 unless written into the new farm bill. Programs funded with TEA money are directed toward markets or countries determined to be using restrictive trade practices or at alternate markets intended to offset lost exports.

About 82 Percent of the Funds Collected from Farmers in 1986 Were Used for Sales Promotion and Research

	Ads aimed at domestic markets	Ads aimed at overseas markets	Research on product development	Total
	million dollars			
Dairy	183.0	0.0	11.0	194.0
Meat	71.0	3.0	10.0	84.0
Fruit	58.2	8.3	4.2	70.7
Field Crops	7.7	17.1	6.1	30.9
Natural Fiber	14.8	5.9	5.8	26.5
Vegetables	8.6	1.0	2.2	11.8
Poultry/eggs	7.2	.1	1.0	8.3
Other	6.7	.5	1.2	8.4
Total	357.2	35.9	41.5	434.6
Refunds, administration, and other costs	—	—	—	95.4
TOTAL COLLECTED				530.0

opment. Almost half was used to promote field crops. In addition to the checkoff funds from farmers, federal funds are used in promotions for exported commodities. The funds are administered by USDA's Foreign Agricultural Service.

Consumer Concern Expressed

Some consumers are concerned that they pay the cost of advertising in higher prices, the economist says. The ultimate effect of advertising on prices depends on how consumers react to the ads and how producers respond to changes in the demand for a product, according to Blisard.

"Initially, consumers may face higher prices from generic promotions because the ads, hopefully, push up demand," says Blisard.

Prices increase with rising demand, if other factors such as income and the price of

Farmers' Contributions to Generic Advertising Almost Doubled in the 1980's

	Ads aimed at domestic markets	Ads aimed at overseas markets	Research on product development	Total
		million dollars		
1979	180.6	19.7	24.6	225.0
1982	172.4	35.5	30.5	238.7
1986	357.2	35.8	41.4	434.6

competing goods remain the same. Effective advertising will increase sales at all prices and reduce consumers' sensitivity to price changes, explains the economist.

Blisard says, however, that in the long run prices may not be affected by advertising expenditures. Over time, producers are likely to respond to a higher price with expanded supplies and reallocation of products among uses.

The economist cites the example of milk to show how supply changes in response to demand. Recent increases in milk consumption, partly due to generic ads, have caused small reallocations of milk supplies from processed uses to the fresh market.

Whether a particular generic promotion helps or hurts consumers depends on the mix of products they regularly purchase, and whether other goods are available to substitute, should prices rise, says the economist.

Lower income consumers would be the group hurt most by price hikes, since food takes a larger share of their disposable income. The effect of higher prices spurred by increased demand on low-income shoppers depends on the mix of foods they purchase and how the mix changes after the prices rise.

Generic ads may introduce a variety of foods, and may offer serving suggestions, recipe ideas, and nutritional information. Programs often include funds for nutrition research and the results are emphasized in many of the newer advertising campaigns. Some of the promotions try to correct misconceptions about a particular food's nutritional value or offset the effects of advertising for nutritionally inferior foods. For example, generic campaigns have urged consumers to substitute milk for soft drinks, or grapes for candy.

Nutrition information is often sent to health professionals, nutrition teachers, sports coaches, and the news media. In recent months, however, consumer groups have questioned the credibility of some of the nutrition information.

Some evaluation research has been conducted, and these studies have provided substantial insight into the extent to which advertising affects sales and consumption, says Blisard. "But measuring the effectiveness of the programs is difficult," he says. "Unfortunately," he adds, "few promotions under way have adequate measures of sales, even where sales data are available. If the public and farmer interests are to be served, promotion organizations and public agencies must ensure that adequate data are generated, and objective research and analyses performed." □

[Based on information provided by economist Noel Blisard of the Commodity Economics Division, Economic Research Service.]

U.S. Farmland Values Rise 4 Percent in 1989

U.S. farmland values went up 4 percent during 1989 to an average of $693 per acre. It was the third straight year of annual increases, including 6 percent in 1988 and 6 percent in 1987.

When adjusted for inflation, however, land values actually slipped a bit last year, because the inflation rate was nearly 5 percent.

Farmland values seem to have settled down somewhat after their roller-coaster ride in the 1980's. A high point of $823 an acre in 1982 was followed by a drop of 27 percent in 5 years to the low point of $599 an acre in early 1987. The decline was one measure of the farm recession that turned out to be the worst in 50 years.

"In 1989, farmland values did not increase as much as some factors seemed to indicate they might have," says economist Roger Hexem of USDA's Economic Research Service.

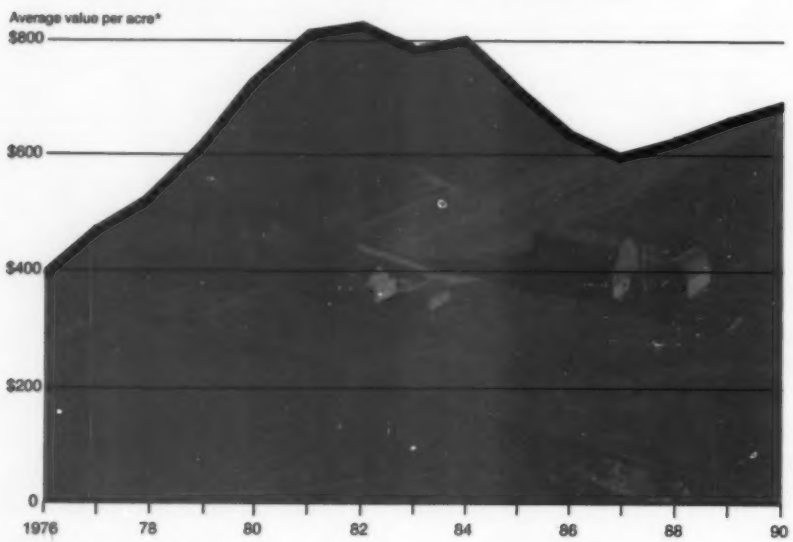
Changes in farmland values varied significantly among regions.

"The modest increase, in a time of positive income and debt indicators, suggests that investors may have anticipated the 1989 conditions," Hexem says. "Increases in land values in 1987 and 1988 may have reflected those anticipations."

Net farm income (the net value of the current year's production, whether sold or not) was at a record high level in 1989. Net cash income was down from the 1988 record but still the third highest ever.

Farm real estate debt and total farm debt both edged lower in 1989, continuing a 6-year decline. Farm debt at the end of the year was 29 percent below the high mark it reached in 1983.

Farmland Values Moved Higher in 1989 for the Third Straight Year



*48 states, excluding Alaska and Hawaii.

Farm Bill Also a Factor

"Other factors that may have held farmland values down include uncertainties about changes in the capital gains tax, possible changes in income and price support programs in the new farm bill, movements in interest rates, and the outcome of the trade liberalization negotiations," Hexem says.

The 1990 farm bill is still taking shape and the GATT (General Agreement on Tariffs and Trade) talks are continuing.

The estimates of farmland values come from the annual Agricultural Land Values Survey that is conducted near the beginning of each year by USDA's National Agricultural Statistics Service (NASS).

The farmers and ranchers in the survey sample are asked to: "Provide your opinion, for your county, of average market value per acre—the value at which farm or ranch land could be sold. This should reflect full market value, including the influence of nonagricultural factors, such as being near an urban area."

Respondents are asked to estimate market values for 4 categories of land: nonirrigated cropland, irrigated cropland, pasture or grazing land, and farm woodlands. The survey also gathers data on cash rents.

The latest farmland value figures are as of January 1, 1990, and the previous year's values were as of February 1. With the calendar year now the reporting time period, the survey is consistent with other statistical reports. Farmland values for 1984-89 have recently been revised to correspond with values reported in the 1987 Census of Agriculture.

8 of 10 Regions Had Rises

Farmland values rose last year in 8 of the 10 farm production regions, but the changes varied significantly among regions, Hexem says. Corn Belt values went up an average of 2 percent during 1989, substantially below the 10-percent gain in the previous year.

Other regional increases in 1989 included 8 percent in both the Northern Plains and

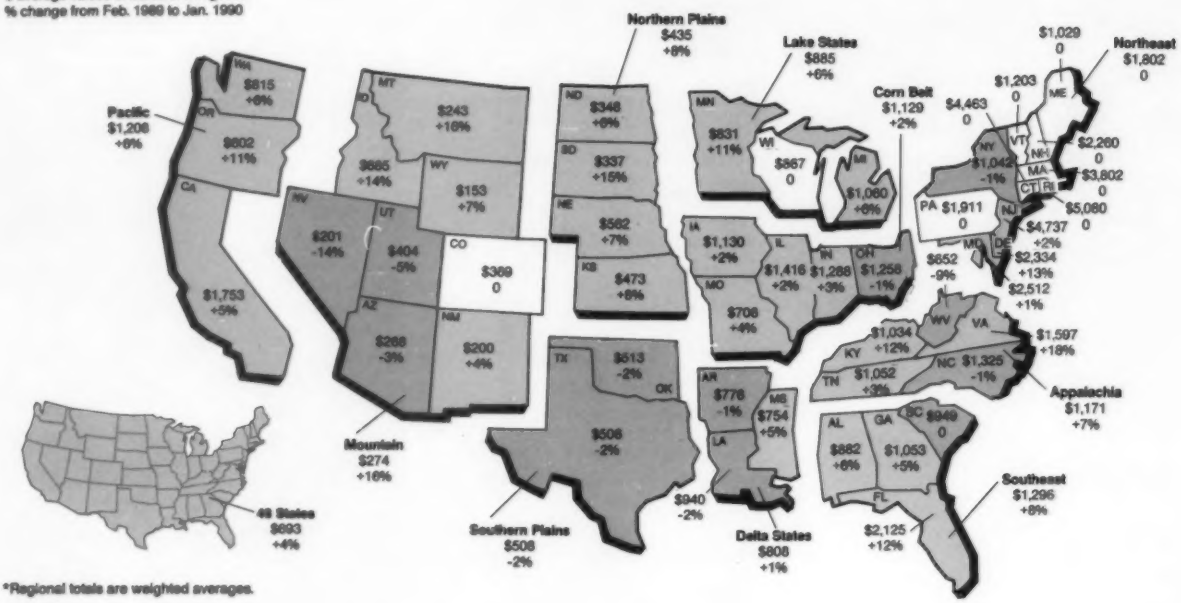
Average Per Acre Value of Farmland and Buildings, by State, 1983-90 [1]

State	As of April 1		As of February 1					As of January 1	Percent change
	1983	1984	1985	1986	1987	1988	1989	1990	1989-90
					Dollars				*Percent*
Northeast:	1,343	1,391	1,346	1,340	1,491	1,586	1,794	1802	0
Maine	708	713	774	854	885	962	1,029	1029	0
New Hampshire	1,174	1,253	1,439	1,682	1,847	2,112	2,260	2260	0
Vermont	842	862	947	1,060	1,114	1,124	1,203	1203	0
Massachusetts	1,963	2,083	2,377	2,761	3,012	3,553	3,802	3802	0
Rhode Island	2,760	2,770	2,990	3,284	3,389	4,748	5,080	5080	0
Connecticut	2,655	2,723	3,005	3,372	3,557	4,171	4,463	4463	0
New York	817	848	820	843	960	993	1,053	1042	-1
New Jersey	3,140	2,959	2,951	2,997	3,729	3,969	4,644	4737	2
Pennsylvania	1,520	1,596	1,427	1,332	1,540	1,579	1,911	1911	0
Delaware	1,829	1,840	1,596	1,684	1,677	1,765	2,065	2334	13
Maryland	2,121	2,236	2,197	2,023	2,009	2,261	2,487	2512	1
Lake States:	1,160	1,147	952	797	707	788	831	885	6
Michigan	1,223	1,255	1,108	1,012	924	971	1,000	1060	6
Wisconsin	1,113	1,104	944	836	777	826	867	867	0
Minnesota	1,165	1,131	898	694	587	700	749	831	11
Corn Belt:	1,482	1,449	1,108	972	900	1,003	1,107	1129	2
Ohio	1,504	1,500	1,215	1,136	1,097	1,199	1,271	1258	-1
Indiana	1,610	1,647	1,344	1,167	1,061	1,158	1,251	1288	3
Illinois	1,837	1,845	1,381	1,232	1,149	1,262	1,388	1416	2
Iowa	1,684	1,518	1,091	873	786	947	1,108	1130	2
Missouri	856	875	689	648	604	640	678	706	4
Northern Plains:	528	513	412	360	331	368	401	435	8
North Dakota	439	447	373	334	303	319	329	348	6
South Dakota	348	363	289	267	238	269	293	337	15
Nebraska	701	645	485	416	400	457	526	562	7
Kansas	601	597	488	415	373	413	438	473	8
Appalachia:	1,082	11,07	1,035	1,025	1,004	1,037	1,095	1171	7
Virginia	1,125	1,125	1,112	1,179	1,154	1,198	1,354	1597	18
West Virginia	688	698	607	616	633	682	716	652	-9
North Carolina	1,314	1,429	1,331	1,254	1,259	1,263	1,339	1325	-1
Kentucky	1,049	1,034	955	941	878	896	923	1034	12
Tennessee	1,014	1,024	944	935	936	1,001	1,021	1052	3
Southeast:	1,092	1,105	1,068	1,038	1,055	1,130	1,202	1296	8
South Carolina	946	926	898	870	792	871	949	949	0
Georgia	929	921	886	853	889	920	1,033	1053	5
Florida	1,576	1,645	1,599	1,537	1,605	1,790	1,897	2125	12
Alabama	826	824	797	803	786	800	832	882	6
Delta States:	1,038	1,074	1,012	880	757	781	803	808	1
Mississippi	894	950	855	778	685	697	718	754	5
Arkansas	972	964	907	779	724	761	784	776	-1
Louisiana	1,351	1,430	1,407	1,191	921	940	959	940	-2
Southern Plains:	574	632	675	579	532	531	518	508	-2
Oklahoma	699	718	597	520	475	480	523	513	-2
Texas	544	612	694	594	546	544	517	506	-2
Mountain:	314	327	300	267	257	257	261	274	5
Montana	259	276	243	233	200	205	209	243	16
Idaho	814	808	739	631	552	572	601	685	14
Wyoming	193	199	181	159	157	147	143	153	7
Colorado	454	469	437	360	368	369	369	369	0
New Mexico	178	194	185	161	156	180	193	200	4
Arizona	289	311	295	271	299	279	276	268	-3
Utah	560	570	513	476	451	425	425	404	-5
Nevada	249	262	244	219	240	227	234	201	-14
Pacific:	1,356	1,399	1,293	1,201	1,084	1,089	1,140	1208	6
Washington	933	972	943	840	756	739	769	815	6
Oregon	705	719	615	570	541	542	542	602	11
California	1,918	1,981	1,841	1,730	1,554	1,575	1,670	1753	5
48 States	788	801	713	640	599	632	667	693	4
Alaska				445	336	309	250	232	-7

1/ Current dollars. Revised 1984-89 values bench marked to values from the 1987 Census of Agriculture. Details in "Agricultural Resources, Agricultural Land Values and Markets Situation and Outlook Report" published in late June.

Farmland Values Were Higher in 27 States, Lower in 11, and Unchanged in 10

$ average values in states and regions*
% change from Feb. 1989 to Jan. 1990



*Regional totals are weighted averages.

the Southeast, 7 percent in Appalachia, 6 percent in the Lake States and the Pacific region, 5 percent in the Mountain region, and 1 percent in the Delta States.

The average for the Southern Plains dropped 2 percent, while the Northeast was unchanged.

"Lower soybean prices were one likely reason that land values in Corn Belt states such as Iowa and Illinois were not up much during 1989," Hexem says. "Higher crop prices make land investors more optimistic about future profits, and lower prices tend to have the opposite effect." Soybean prices averaged $5.50 per bushel nationwide during 1989, a considerable decrease from the 1988 average of $7.42.

Wheat prices were relatively strong in 1989, Hexem says, and land values in the Northern Plains States—where wheat is an important crop—showed strength in comparison with neighboring regions.

The analyst added that the drop in land values in Texas, Oklahoma, and Louisiana was probably related to continued difficult economic conditions in the oil and gas industries and consequent effects on state economies.

The survey figures are statewide averages, Hexem notes, and some states showed considerable in-state variability. The dollar amounts of average farmland values per acre include the value of farm buildings.

Farmland values in most of the top 10 farm states, based on 1988 total agricultural cash receipts, are still at least 25 percent below their record highs in the early 1980's. However, eighth-place Florida's land values are record high. The percentages below peak values for the others in the top 10, in order of total receipts, are: California 11 percent, Texas 27 percent, Iowa 43 percent, Nebraska 23 percent, Kansas 25 percent, Illinois 35 percent, Minnesota 35 percent, Wisconsin 25 percent, and North Carolina 7 percent.

The latest cash rent figures are generally higher in the Corn Belt and Minnesota, but the increases last year were more moderate than those reported for a year earlier. Rents tended to be lower in the Delta States, the Southeast, and Appalachia, where soybeans are a major cash crop.

Hexem says that lower prices for corn and soybeans in 1989 apparently put downward pressure on some cash rents, while record cattle prices helped support higher pasture rents.

Interest rates on farm real estate loans in 1989 averaged about the same as a year earlier, but real rates (adjusted for inflation) were slightly lower. □

[Based primarily on information provided by economist Roger Hexem of the Resources and Technology Division, Economic Research Service.]

REPORTS IN THE NEWS

Charts Depict U.S. Agriculture

Each of the 329 charts in the 1990 Agricultural Chartbook is designed to convey an important message quickly and simply.

One of the messages of the data is that U.S. agriculture has regained its world competitiveness, according to the report's introduction, by Bruce Gardner, USDA's Assistant Secretary for Economics.

"With another strong income year, farmers' balance sheets should continue to improve in 1990," he says, adding: "With crop receipts expected to be record high, livestock receipts near last year's record, and overall production expenses holding steady, 1990 cash farm income should be near the record 1988 level."

The charts in this annual publication depict both recent developments and long-range trends. The 120-page publication contains an index with names and telephone numbers of USDA specialists to contact for more information. The chartbook can serve as an important reference work for anyone involved in or interested in U.S. agriculture.

The charts are printed in black and white and can be easily reproduced for use as teaching tools or visual aids for speeches or reports.

Topics covered by the charts include crop and livestock production, agricultural trade, farm financial conditions, the national and international economic outlook, farm inputs, land use and values, farm and related employment, debt and credit, food consumption and prices, and many more.

1990 Agricultural Chartbook. Published April 1990; 120 pages; $11 ($13.75 to non-U.S. addresses).

Livestock Sector's Costs Analyzed

This report presents a way to make a consistent set of cost-and-returns estimates for U.S. livestock production in 1972-87, a period in which there were data gaps and in which many estimating methods and formats were used.

The resulting consistent time series data can be used to track changes in the cost structure of the livestock industry over time and to analyze producer responses to costs.

The format matches that used in the *Economic Indicators of the Farm Sector: Costs of Production* series published annually by USDA's Economic Research Service.

Highlights of the report include:

- Costs of producing fed beef (cash expenses) from 1972 to 1987 averaged $57.16 per hundredweight (cwt) sold. Cash receipts averaged $54.37 per cwt over these 16 years, failing to cover cash expenses by an average of $2.79 per cwt.
- The average U.S. beef cow-calf enterprise had higher cash expenses than cash receipts in 9 of the 16 years. Net returns hit a high of $121.14 per cow in 1979 and a low of minus $42.76 per cow in 1975.
- Farrow-to-finish enterprises averaged net returns of $6.23 per cwt more than cash expenses, ranging from minus $2.66 per cwt in 1974 to $20.91 per cwt in 1987. But receipts for the period averaged $1.33 per cwt more than the sum of cash and capital replacement expenses, allowing farrow-to-finishers to replace facilities profitably.

Costs of Producing U.S. Livestock, 1972-87: Estimating and Methodology Update by Hosein Shapouri, Russell Bowe, Terry Crawford, and Warren Jessee. Published April 1990; 104 pages; $11 ($13.75 to non-U.S. addresses).

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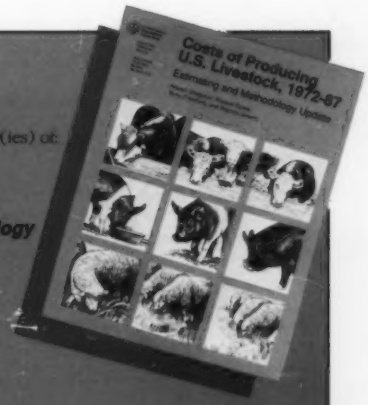

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AGRICULTURAL ROUNDUP

Japan's Farm Policies Tied to Its Culture

Japan buys about one-fifth of all U.S. agricultural exports, yet that nation's intricate farm and trading policies sometimes baffle—and occasionally frustrate—entrepreneurs on this side of the Pacific.

Economist William T. Coyle of USDA's Economic Research Service credits those policies to a mixture of history, geography, technological change, politics, and diet preferences. He notes that the latter two factors have been changing in recent years, and Japan has been expanding its import markets. While the progress is "encouraging," he reports, it is worth remembering that "Japanese agricultural policy is woven into the country's culture."

Coyle sketched the workings of the farm and trade policies by examining two producing sectors, rice and beef, matching Japan's commodity practices with those of the United States. He suggests that the Japanese will be making further changes as urban dwellers' ties with the countryside weaken, the yen appreciates in relation to other currencies, and rural-urban competition for land and water resources intensifies.

In comparison with the United States, Japan is more densely populated, with more persons per cropland hectare (24 versus 1.2) and a farm count that U.S. farmers would call far too high. Average size of the 4 million farms in Japan is 3.25 acres, while the average for the 2 million U.S. farms is 463 acres. On that small a production scale, most Japanese farmers cannot afford to work full-time in farming.

By value, the most significant Japanese crop is rice, followed by livestock products (both meat and milk), vegetables, and fruit. The Japanese are accustomed to importing foods other than rice. About 70 percent of feed for livestock is imported.

U.S. farm production, by value, is topped by livestock products, followed by nonrice grains and vegetables. And the prices that U.S. consumers pay for food are generally lower than what Japanese consumers pay.

Caloric intake and diet also differ significantly between the two countries. Daily intake per capita in Japan is 2,600 calories, 72 percent of the rate in the United States. American diners favor meats, milk, fruits, sweeteners, and potatoes, while the Japanese eat proportionally more fish, grains, vegetables, and eggs. Coyle says that the Japanese diet also is changing as consumer incomes rise. With food taking a proportionally smaller share of family income, Japanese are eating out more and buying more livestock products and less rice.

Japan has a policy of being self-sufficient in rice. Its programs since the 1940's have focused on developing an abundant domestic supply. The nation was importing rice at the beginning of World War II, and many older Japanese remember the food shortages during and immediately after the war.

In 1961, the government adopted the Basic Agricultural Law, which led to expanded rice production, and for the remainder of the decade the producer price for rice rose in real terms. Farmers hold disproportionate political power

in Japan because voting districts have not been redrawn to reflect the population shift to the cities after the war.

The results of the high-price policy for rice were predictable: Production expanded, consumption declined, and government stocks rose.

At the end of the 1960's and again in the late 1970's, the government tried to reduce production by converting rice acreage into other crops through diversion payments. It also tried to increase consumption through export subsidies and alternative uses. Although many other countries were producing rice for export at lower cost, Japan would not permit imports to undercut its domestic prices and lower production.

U.S. rice growers have less protection against market competition, Coyle notes, but the government here also supports the price of rice and pays farmers to divert acreage from production. In 1982-86, 88 percent of a Japanese grower's average annual income from rice production was the result of government programs. The "producer subsidy equivalent" for rice in the United States for the same period was 45 percent of average annual production income.

Until recent years, Japan has protected its beef industry through import quotas, price supports, and tariffs. Cattle farms are small, averaging 9 to 10 head. The average for U.S. cattle farms is 70-100 head.

Coyle notes that the United States and the Japanese have been discussing Japan's beef-import barriers since the 1960's.

Two years ago, under a trade understanding that included oranges and orange juice, the island nation agreed to increase its beef import quota through 1990. The agreement calls for Japan to eliminate the quota next April and raise the current tariff from 25 percent to 70 percent. It will reduce the tariff to 50 percent by 1993.

Coyle's analysis of Japanese farm policy has been prepared in the new ERS "briefing book" format that mixes text and illustrative material like a slide talk in nontechnical language. Copies of the publication, *The Basic Mechanisms of Japanese Farm Policy*, MP-1478, can be ordered for $5.50 each through ERS-NASS, 800-999-6779. VISA and MasterCard charges will be accepted.

— Al Veerhoff

Leaders

World's Leading Nations in 1989 Per Capita Consumption of Beef, Pork, and Poultry

Beef and veal		Pork		Poultry	
Country rankings	Pounds per capita [1]	Country rankings [2]	Pounds per capita [1]	Country rankings	Pounds per capita [3]
1. Argentina	155.4	Hungary	169.4	United States	84.5
2. Uruguay	127.7	East Germany	154.3	Singapore	82.9
3. United States	99.3	Denmark	134.1	Israel	72.7
4. Canada	87.6	Czechoslovakia	129.2	Hong Kong	68.8
5. Australia	82.5	West Germany	112.8	Saudi Arabia	63.6
6. New Zealand	81.3	Austria	112.2	Kuwait	61.5
7. USSR	66.2	Belgium-Lux.	104.1	Canada	59.7
8. France	62.9	Bulgaria	101.5	Australia	52.7
9. Czechoslovakia	59.2	Spain	100.1	Hungary	51.9
10. Italy	59.2	Netherlands	99.0	Spain	49.6
11. Switzerland	57.3	Poland	98.8	Taiwan	46.5
12. West Germany	56.8	Hong Kong	94.7	Portugal	44.6
13. Greece	56.6	Switzerland	91.8	France	43.2
14. Mexico	55.4	Taiwan	83.5	United Kingdom	42.0
15. Panama	52.9	Ireland	77.8	United Arab Emt.	41.8

[1] Carcass-weight equivalents. [2] The United States ranked second, at 66.6 pounds per capita. [3] Ready-to-cook basis. For more information contact economist Linda Bailey (202) 786-1691.

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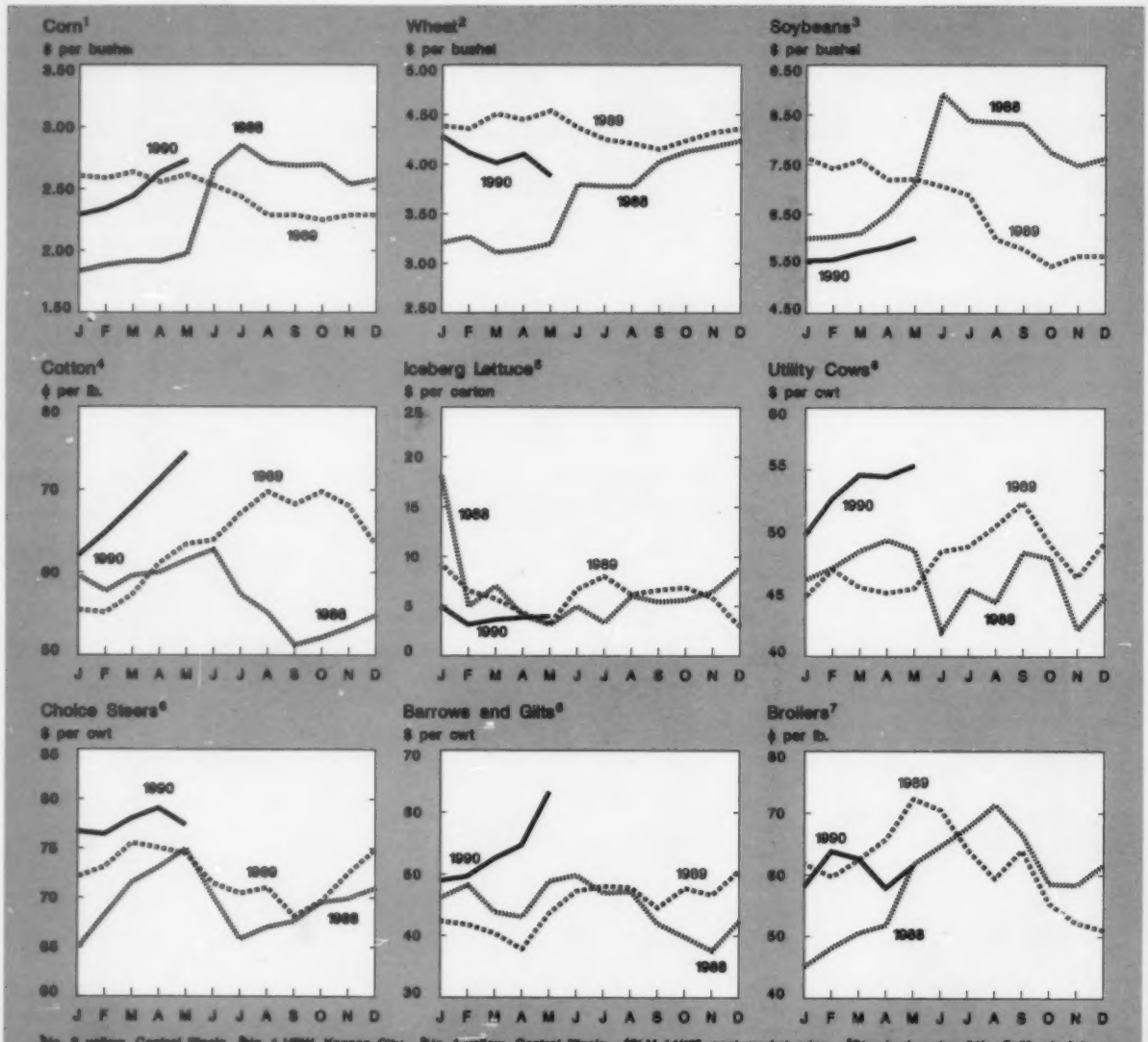
FARMLINE TRENDS

Monthly Price Monitor

USDA's May 1990 inflation-adjusted index of farm prices increased 2.0% from April and was 3.4% above its year-earlier level. Corn rose 10¢ to $2.74 per bushel, the highest price since July 1988. Wheat lost 22¢ to $3.89 per bushel, its lowest since August 1988. Soybeans gained 18¢ to $6.03, the highest price since July 1989. Cotton continued upward to 74.6¢ per lb. Among meat animals, utility cows increased to $55.40 per cwt, the highest since May 1979. With weather improvements, producers are retaining 10% more cows than last year, hence higher prices. Choice steers lost $1.69 per cwt to $77.58. Barrows and gilts jumped sharply to $63.43 per cwt, the highest since August 1986. Broilers gained 3.6¢ to 61.7¢ per lb.



[1]No. 2 yellow, Central Illinois. [2]No. 1 HRW, Kansas City. [3]No. 1 yellow, Central Illinois. [4]SLM 1-1/16", spot market price. [5]Standard carton 24's, California-Arizona. [6]Omaha. [7]Wholesale, New York. All prices shown are monthly averages.

Who's First?

Rankings of the Top Farm States by Selected Characteristics

	1st	2nd	3rd	4th	5th	6th	7th	8th
Number of farms, June 1, 1989 farms: U.S. total: 2,172,920 farms	Texas 186,000	Missouri 108,000	Iowa 115,000	Kentucky 96,000	Tennessee 91,000	Minnesota 90,000	Ohio 87,000	Illinois 86,000
Land in farms, June 1, 1989 acres, in thousands: U.S. total: 991,473,000 acres	Texas 132,000	Montana 60,600	Kansas 47,900	Nebraska 47,100	New Mexico 44,500	So. Dakota 44,300	No. Dakota 39,500	Arizona 36,000
Average farm size, June 1, 1989 avg. acres per farm: U.S. average: 463 acres	Arizona 4,444	Wyoming 3,910	Nevada 3,580	New Mexico 3,179	Montana 2,453	Alaska 1,883	So. Dakota 1,269	Colorado 1,241
Total value of farm real estate (land & buildings), Jan. 1, 1990 millions of dollars: U.S. total: $685,261,000,000[1]	Texas 86,853	California 54,868	Illinois 40,355	Iowa 37,860	Nebraska 33,485	Minnesota 24,942	Florida 24,013	Kansas 22,647
Farm real estate values per acre, Jan. 1, 1990 avg. value, $ per acre: U.S. average: $693 per acre[1]	R. Island 5,060	N. Jersey 4,737	Connecticut 4,483	Massachusetts 3,802	Maryland 2,512	Delaware 2,334	N. Hampshire 2,260	Florida 2,144
Acres planted to principal field crops, 1989 acres, in thousands U.S. total: 317,188,000	Iowa 24,627	Illinois 23,541	No. Dakota 21,559	Minnesota 19,384	Kansas 18,231	Texas 16,136	Nebraska 15,161	So. Dakota 16,120
Number of cattle & calves, Jan. 1, 1990 thousand head: U.S. total: 99,180,000	Texas 13,600	Kansas 5,850	Nebraska 5,500	Oklahoma 5,150	California 4,700	Iowa 4,600	Missouri 4,500	Wisconsin 4,130
Number of hogs & pigs, Dec. 1, 1989 thousand head: U.S. total: 55,469,000 head	Iowa 14,000	Illinois 5,600	Minnesota 4,600	Indiana 4,300	Nebraska 4,100	Missouri 2,850	N. Carolina 2,700	Ohio 2,210
Broiler production, Dec. 1, 1988 - Nov. 30, 1989 millions of birds: U.S. total: 5,036,221,000 birds	Arkansas 920	Georgia 811	Alabama 750	No. Carolina 523	Mississippi 387	Texas 292	Maryland 266	Delaware 226
Number of sheep & lambs, Jan. 1, 1990 thousand head: U.S. total: 10,858,000 head	Texas 1,870	California 940	Wyoming 837	Colorado 825	Montana 800	So. Dakota 590	New Mexico 515	Utah 503
Cash receipts from crop marketings, 1988 millions of dollars: U.S. total: $72,569,013,000	California 11,894	Florida 4,697	Illinois 4,218	Iowa 4,029	Texas 3,763	Minnesota 2,743	Nebraska 2,643	Indiana[2] 2,643
Cash receipts from marketings of livestock products, 1988 millions of dollars: U.S. total: $78,861,748,000	Texas 5,498	Nebraska 5,336	Iowa 5,045	California 4,704	Wisconsin 4,281	Kansas 4,265	Minnesota 3,284	Colorado 2,656
Direct government payments to farmers, 1988 millions of dollars: U.S. total: $14,479,000,000	Iowa 1,845	Illinois 1,374	Texas 1,350	Nebraska 1,092	Minnesota 1,036	Kansas 848	No. Dakota 715	Indiana 616
Net cash income from farming, 1988 millions of dollars: U.S. total: $59,898,700,000	California 6,536	Texas 3,689	Iowa 3,439	Florida 3,052	Minnesota 2,721	Nebraska 2,679	Illinois 2,632	Wisconsin 2,216

[1]Excludes Alaska and Hawaii. [2]Where state data are equal, rankings are based on the previous year's numbers.

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